Claims:

1. A flaky, isotropic SmFeN powdery magnet material prepared by roll-quenching a molten alloy and nitriding the alloy powder thus obtained to form a magnet alloy;
characterized in that the magnet alloy has an alloy composition of the formula, by atomic %:

$$Sm_xFe_{100-x-v}N_v$$

wherein $7 \leqq x \leqq 12$ and $0.5 \leqq v \leqq 20$; that the crystal structure is $TbCu_7$ type; and that the thickness of the flakes is 10-40μm.

2. A flaky, isotropic SmFeN powdery magnet material prepared by roll-quenching a molten alloy and nitriding the alloy powder thus obtained to form a magnet alloy;
characterized in that the magnet alloy has an alloy composition of the formula, by atomic %:

$$Sm_xFe_{100-x-y-v}M^1{}_yN_v$$

wherein M^1 is at least one member selected from the group consisting of Hf and Zr; $7 \leqq x \leqq 12$, $0.1 \leqq y \leqq 1.5$, and $0.5 \leqq v \leqq 20$; that the crystal structure is $TbCu_7$ type; and that the thickness of the flakes is 10-40μm.

3. A flaky, isotropic SmFeN powdery magnet material prepared by roll-quenching a molten alloy and nitriding the alloy powder thus obtained to form a magnet alloy;
characterized in that the magnet alloy has an alloy composition of the formula, by atomic %:

$$Sm_xFe_{100-x-z-v}M^2{}_zN_v$$

wherein M^2 is at least one member selected from the group consisting of Si, Nb, Ti, Ga, Al, Ta and C; $7 \leqq x \leqq 12$, $0.1 \leqq z \leqq 1.0$ and $0.5 \leqq v \leqq 20$; that the crystal structure is $TbCu_7$ type; and that the thickness of the flakes is 10-40μm.

4. A powdery magnet material according to one of claims 1 to 3, wherein up to 30 at.% of Sm is substituted with Ce.

5. A powdery magnet material according to one of claims 1 to 3, wherein up to 30 at.% of Sm is substituted with a rare earth metal other than Ce.

6. A powdery magnet material according to one of claims 1 to 5, wherein up to 35 at.% of Fe is substituted with Co.

7. A powdery magnet material according to one of claims 1 to 6, wherein the average crystal grain size of the material is 10nm to 0.5μm.

8. A powdery magnet material according to one of claims 1 to 7, wherein the magnet powder has an intrinsic coercive force of 7 kOe or higher.

9. A process for preparing a flaky, isotropic SmFeN powdery magnet material recited in claim 1; which comprises the steps of combining and melting alloy components to form an alloy composition of the formula, by atomic %:

$$Sm_xFe_{100-x-v}N_v$$

wherein $7 \leqq x \leqq 12$, and $0.5 \leqq v \leqq 20$; and the crystal structure being $TbCu_7$ type; spilling the molten alloy on a quenching roll or rolls which rotate at a peripheral speed of 30-45 m/sec., annealing the flaky powder thus obtained in an inert atmosphere at a temperature of 500-900°C; and then nitriding the annealed powder.

10. A process for preparing a flaky, isotropic SmFeN powdery magnet material recited in claim 2; which comprises the steps of combining and melting alloy components to form an alloy composition of the formula, by atomic %:

$$Sm_xFe_{100-x-y-v}M^1_yN_v$$

wherein M^1 is at least one member selected from the group consisting of Hf and Zr; $7 \leqq x \leqq 12$, $0.1 \leqq y \leqq 1.5$ and $0.5 \leqq v \leqq 20$; the crystal structure being $TbCu_7$ type; spilling the molten alloy on a quenching roll or rolls which rotate at a peripheral speed of 20-45 m/sec., annealing the flaky powder thus obtained in an inert atmosphere at a temperature of 500-900°C, and then nitriding the annealed powder.

11. A process for preparing a flaky, isotropic SmFeN powdery magnet material recited in claim 3, which comprises the steps of combining and melting alloy components to form an alloy composition of the formula, by atomic %:

$$Sm_xFe_{100-x-z-v}M^2_zN_v$$

wherein M^2 is at least one member selected from the group consisting of Si, Nb, Ti, Ga, Al, Ta and C; $7 \leqq x \leqq 12$, $0.1 \leqq z \leqq 1.0$ and $0.5 \leqq v \leqq 20$; the crystal structure being $TbCu_7$ type; spilling the molten alloy on a quenching roll or rolls which rotate at a peripheral speed of 20-45 m/sec., annealing the flaky powder thus obtained in an inert

atmosphere at a temperature of 500-900°C, and then nitriding the annealed powder.

12. A process for preparing according to one of claims 9 to 11, wherein the roll-quenching is carried out in argon gas atmosphere of a pressure ranging from 0.0001 Torr to 2 atms.

13. A process for preparing according to one of claims 9 to 11, wherein the roll-quenching is carried out using a quenching roll or rolls made of a metal selected from Cu, a Cr-Cu alloy or a Be-Cu alloy.

14. A bonded magnet made by processing the magnet powder according to one of claims 1 to 8 with a binder to the shape of a magnet.